No. 22. Bronze Knocker from Brescia, 40 cm. high, from the design of Mr. Luthmer, Archt, Berlin.

VARIOUS.

A Cement

to stop cracks in glass vessels to resist moisture and heat. Dissolve caseine in cold saturated solution of borax and with this solution paste strips of hog's or bullock's bladder (softened in water) on the cracks of glass, and dry at a gentle heat; if the vessel is to be heated, coat the bladder on the outside before it has become quite dry, with a paste of a rather concentrated solution of silicate of soda and quick lime or plaster of Paris.

Transferring Pencil Drawing on Paper to other Paper.

Any kind of reasonably fine paper, either thick or thin, serves to receive the copy. Simply lay it upon the drawing board, then upon the face of the drawing paper lay the transfer paper, and upon the top of the lot lay the drawing, pencil marks upwards, fasten the whole three sheets together, and to the board, by four drawing pins, one at each corner, then proceed to run over the pencil marks with a fine but dull pointed instrument. Use for the purpose a stocking darning needle with a handle, and the point ground off; run over the marks in the same way as with a transparent slate. If the drawing is not too thick, and the carbon paper good, a good copy with care and practice may be obtained. Copies are also taken by first perforating the picture with small holes along the marked lines with a needle, then afterwards laying it on the face of another sheet of paper, and rubbing it over with powdered black lead; the black lead goes through the holes and leaves a dotted outline beneath. A pencil is afterwards run over the marks, and a fair copy is produced, which can be quickly multiplied.

A Solvent for Shellac.

Dr. I. Walz describes the following process for obtaining a neutral solution of shellac in water. The shellac is broken up and covered with a concentrated solution of carbonate of ammonia, and boiled upon the water bath until the ammoniacal smell has disappeared. More of the solution is added, and the boiling is continued until the shellac forms a coherent, sponge-like mass. The carbonate of ammonia is then expelled by further boiling, and the mass will readily dissolve by pouring boiling water upon it. A kind of soap will be found floating on the surface, which may readily be removed by straining. The solution, brought on paper, cloth, etc., dries rapidly, and leaves a thin, lustrous and adherent film of shellac behind.